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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,230	02/27/2002	Sylvain S. Hantzer	GJH-0204	6953

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EXAMINER

7
GRIFFIN, WALTER DEAN

ART UNIT

PAPER NUMBER

1764

DATE MAILED: 08/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/085,230	Applicant(s) HANTZER ET AL.	
	Examiner Walter D. Griffin	Art Unit 1764	

-- **Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4,5</u> | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: The disclosure does not appear to contain a brief description of the figure. One is required.

Appropriate correction is required.

Claim Objections

Claim 11 is objected to because of the following informalities: A word or words is missing after the word “mesoporous” in claim 11.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2, 3, 6, and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2 and 3 are indefinite because the expression “the Group VIII metal noble metal” in claim 2 lacks proper antecedent basis in claim 1.

Claim 6 is indefinite because the expression “the concentration of noble metal” lacks proper antecedent basis in claim 1.

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Claim 12 is indefinite because the expression "the mesoporous catalyst" lacks proper antecedent basis in claim 11.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hantzer et al. (US 6,187,176) in view of Shih et al. (US 5,344,553).

The Hantzer reference discloses a process for the production of a white oil. The process comprises hydrotreating a mineral oil feedstock equivalent to that which is claimed in a first

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reaction stage containing a hydrotreating catalyst and a hydrogen-containing treat gas, which first reaction stage is operated under hydrotreating conditions, thereby resulting in a said feedstock being at least partially hydrogenated and desulfurized; (b) hydrotreating the reaction product of said first reaction stage in a second reaction stage in the presence of (i) a hydrodesulfurization catalyst comprised of a Group VIII metal on an inorganic support, (ii) a hydrogen-containing treat gas, and (iii) a hydrogen sulfide sorbent material, wherein said second reaction stage is operated at temperatures from about 40°C to 500°C and pressures from about 100 to 3,000 psig; and (c) hydrogenating the reaction product from said second reaction stage in a third reaction stage in the presence of a nickel based catalyst, thereby producing a white oil. The Group VIII metal in the hydrodesulfurization catalyst includes noble metals such as platinum. It may also contain a promoter such as Re or Cu. Total metals loading in the catalysts ranges from 0.01 to 5 weight percent. See column 3, lines 52-67; column 4, lines 1-14 and 64-67; column 5, lines 1-35; column 6, lines 1-24; and column 7, lines 23-52.

The Hantzer reference does not disclose a hydrodesulfurization catalyst that contains an M41S support. It also does not disclose that the treatment with the sorbent as a separate stage.

The Shih reference discloses that an M41S (i.e., MCM-41) supported catalyst is effective in hydrodesulfurization processes. See column 4, lines 1-13 and 54-68.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Hantzer by utilizing a hydrodesulfurization catalyst that contains an M41S support as suggested by Shih because such a catalyst is effective for hydrodesulfurization.

It also would have been obvious to one having ordinary skill in the art at the time the

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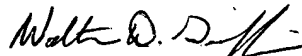
invention was made to have modified the process of Hantzer by utilizing a separate sorbent stage because the result would be expected to be similar to the disclosed combined HDS/sorbent stage since in both configurations, the hydrocarbon is hydrotreated and also is contacted with a sorbent.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter D. Griffin whose telephone number is 703-305-3774. The examiner can normally be reached on Monday-Friday 6:30 to 4:00 with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 703-308-6824. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.



Walter D. Griffin
Primary Examiner
Art Unit 1764

WG
August 11, 2003